

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (withdrawn): A fungus *Aspergillus sp.* deposited in the Microbial Type Culture Collection and Gene bank (MTCC) of Institute of Microbial Technology, Chandigarh, India, under the accession number MTCC 5102.
2. (withdrawn): A fungus as claimed in claim 1, wherein the said fungi is:
  - (a) a deuteromycete fungus;
  - (b) it appears granular, light yellow-green to deep yellow-green in color in malt extract agar plate;
  - (c) conidiophores are uni-seriate, conidial heads are globose and echinulate, and
  - (d) grows in the sea water and distilled water with carbon and nitrogen source in a pH range of 7.0-9.0 and temperature range of 5° to 30° C.
3. (withdrawn): The fungus claimed in claim 1, wherein it can be grown in distilled water containing carbon and nitrogen source with pH of about 7.0 and temperature of about 30°C
4. (withdrawn): The fungus claimed in claim 1, wherein it can be grown in seawater containing carbon and nitrogen source with pH of about 9.0 and temperature of about 5°C.

5. (withdrawn): A low temperature active alkaline protease enzyme.
6. (withdrawn): A protease enzyme as claimed in claim 5, wherein, the said enzyme is active in the pH range of 6.0 to 11.0.
7. (withdrawn): A protease enzyme as claimed in claim 6, wherein the most preferred pH is about 10.
8. (withdrawn): A protease enzyme as claimed in claim 5, wherein, the said enzyme shows activity within a range of 15°C to 60°C.
9. (withdrawn): A protease enzyme as claimed in claim 5, wherein the enzyme shows 100% activity at about 42-47°C.
10. (withdrawn): A protease enzyme as claimed in claim 5, wherein, the said enzyme is thermo-stable within temperature range of 40°C to 50°C.
11. (withdrawn): A protease enzyme as claimed in claim 5, wherein, the maximum thermo-stability was obtained at about 43-47°C.

12. (withdrawn): A protease enzyme as claimed in claim 5, wherein, the said enzyme shows maximum activity with an incubation period of 30 to 60 minutes.

13. (withdrawn): A protease enzyme as claimed in claim 5, wherein the said enzyme shows increased activity with increasing concentration of enzyme.

14. (withdrawn): A protease enzyme as claimed in claim 5, wherein, the said enzyme shows maximum activity at a substrate concentration of 1.5% to 2.0%.

15. (withdrawn): A protease enzyme as claimed in claim 5, wherein, the said enzyme produced by the said fungus is serine protease.

16. (currently amended): A process for producing ~~low temperature~~ alkaline protease enzyme from *Aspergillus sp.* 5102 fungal strain deposited under MTCC accession no. MTCC 5102, said process comprising the steps of:

a) growing an *Aspergillus sp.* fungal strain MTCC 5102 in seawater with ~~a~~ as culture medium containing ~~malt extract~~ carbon source and a nitrogen source at a temperature selected from the range consisting of 15-60° C to obtain a fungal mat;

b) macerating the fungal mat to obtain a starter culture;

c) adding the starter culture to ~~the~~ a liquid Czapek Dox experimental medium comprising glucose, NaNO<sub>3</sub>, K<sub>2</sub>HPO<sub>4</sub>, MgSO<sub>4</sub>, KCl and Fe<sub>2</sub>SO<sub>4</sub><sup>-1</sup> seawater, wherein said medium exhibits a with a pH range of 7.0 to 9.0;

d) allowing the culture to grow for 4 to 6 days as a shallow static culture, and

e) filtering ~~the~~ a cell free clear supernatant solution obtained from step (d) to obtain alkaline protease.

17. (currently amended): The process as claimed in claim 16, wherein the ~~fungus~~ *Aspergillus sp. 5102* ~~bearing international deposition number MTCC 5102 having~~ has the following characteristics:

a) a deuteromycete fungus;

b) it appears granular, light yellow-green to deep yellow-green in color in malt extract agar plate;

c) conidiophores are uni-seriate, conidial heads are globose and echinulate, and

d) grows in the sea water and distilled water with carbon and nitrogen source in a pH range of 7.0-9.0 and temperature range of 5° to 30° C.

18. (currently amended): The process as claimed in claim 16, wherein the ~~fungus~~ *Aspergillus sp. 5102* ~~can be is grown in distilled water seawater at a temperature of about 30°C and wherein the culture medium containing carbon and nitrogen source with~~ has a pH of about 7.0 ~~and temperature of about 30°C.~~

19. (currently amended): The process as claimed in claim 16, wherein the *Aspergillus* sp. 5102 ~~said fungus can be~~ grown in seawater at a temperature of about 30°C and wherein the culture medium of step (a) containing carbon and nitrogen source with has a pH of about 9.0 and temperature of about 5°C.

20. (currently amended): A process as claimed in claim 16, wherein the culture medium of step (a) media is comprised of water-seawater mixed with and about 0.3% (w/v) peptone and about 2.0% (w/v) of malt extract.

21. (currently amended): A process as claimed in claim 16 (e), wherein, the experimental medium of step (c) comprising further comprises Czapek-Dox broth to which added glucose or cellulose at a concentration of 1% (w/v), commercially available casein, spray-dried dairy whitener, soybean meal, molasses or corn steep liquor in a concentration of independently at 1% (w/v).

22. (withdrawn): A method of using a low temperature-active alkaline protease as detergent additive, for dehairing of hides, in food industries, for processing of waste feathers, recovery of silver from gelatine-coated X-ray films and treatment of industrial and domestic wastes and other similar applications wherever required by applying/treating a fabric, hide, food materials, feathers, x-ray films and industrial and domestic wastes with the said alkaline protease.